

## **INTRACELLULAR COMPLEXES AS BIOMARKERS**

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### **Abstract of the Invention**

The invention provides a method for determining a disease status of a patient by  
10 measuring expression levels of selected intracellular complexes. In one aspect of the invention,  
the activation status of apoptotic pathways in a patient sample is determined by measuring  
relative amounts of protein-protein complexes that are characteristic of the apoptotic pathways.  
In particular, the invention provides a method of determining the activation status of the  
mitochondrial apoptotic pathway by simultaneously measuring relative amounts of complexes  
15 between 14-3-3 proteins and BAD proteins on the one hand and complexes of Bcl-2 proteins and  
BAD proteins on the other hand. Preferably, methods of the invention are implemented by using  
sets of binding compounds having releasable molecular tags that are specific for multiple  
components of one or more complexes formed within apoptotic pathways. After binding,  
molecular tags are released and separated from the assay mixture for analysis.